

REMARKS

The Office Action mailed on June 14, 2007, has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 1, 4-31, 34-36, 39-45 and 47-51 were pending. By this paper, Applicants do not cancel or add any claims. Therefore, 1, 3-31, 34-36, 39-45, and 47-51 remain pending.

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Indication of Allowable Subject Matter

Applicants thank Examiner Gray for the indication that claims 47 and 48 contain allowable subject matter.

The Finality of the Present Office Action is Improper

Previously pending claim 46 (now claim 1) was indicated in the last Office Action to include allowable subject matter. In reliance on this indication, Applicants amended claim 1 to include the recitations of claim 46 (effectively placing claim 46 into independent form), and decided to withhold proffering arguments against the rejections, as with the amendments to the claims, the application would be in condition for allowance.

Now, in the present Office Action, claim 1 (previous claim 46) is rejected. Applicants submit that because this Office Action contains a rejection of a claim not previously rejected (claim 1 – former claim 46), the Office Action should not be a Final Office Action.

Acknowledgement of Priority Papers is Requested

Applicants note that the PTO has repeatedly ignored Applicants' plea to acknowledge the foreign priority of this application.

Applicants request that an examiner obtain the priority papers from either the parent application of this case (Serial No. 10/482,379) or from the International Bureau. The parent of this case entered prosecution from PCT application PCT/EP02/07269. Applicants complied with PCT Rule 17(a)/(b) in the parent application (Serial No. 10/482,379). Therefore, the examiner should either review the file history of the parent application, or, as is detailed in the MPEP (see Rule 17.2), request that the International Bureau furnish a copy of the priority document to the PTO, and then acknowledge receipt of the priority papers for EP 01 202 775.1 (filed July 20, 2001).

Rejections under 35 U.S.C. § 103

Claims 1, 3-31,¹ 34-36, 39-45 and 49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Soens (U.S. Patent No. 4,664,971) in view of Applicant's very own disclosure (page 5, lines 21-26 of Marandel (EP 0 953 651)) and Everett (U.S. Patent No. 2,050,298) or Webber (U.S. Patent No. 3,379,000). Also, claims 1, 3-5, 9-11, 13, 15-17, 21-30, 36, 39-45, 49, 50, and 51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rivas (U.S. Patent No. 5,904,980) in view of Applicant's very own disclosure (page 5, lines 21-26 of Marandel). Applicants respectfully traverse the rejection as to the claims above, and submit that these claims are allowable for at least the following reasons.

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As a preliminary matter, Applicants rely on Hauser (U.S. Patent Number 6,048,416) to detail the teachings of Marandel, because Marandel and Hauser both claim priority to FR 98 05356. Accordingly, Applicants submit that Hauser may be used to understand the teachings of the non-English Marandel, and Applicants hereinafter will refer to Marandel/Hauser when relying on Hauser to illuminate the teachings of Marandel.

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¹ Note claim 3 was cancelled in a prior Response, and thus was not pending at the time of the current Office Action.

Applicants rely on MPEP § 2143, which states that:

[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

It is respectfully submitted that at least the first and third criteria of MPEP § 2143 have not been met in the Office Action.

The Cited References Do Not Suggest All Claim Recitations

Even if the first requirement of MPEP § 2143 were to be considered satisfied in the Office Action (which it is not, as explained below), the cited references still do not meet the third requirement, which is that “the prior art reference (or references when combined) must teach or suggest all the claim limitations.”

Claims 1 and 31, from which all other claims depend, explicitly and clearly recite that the plastic article includes bundle drawn stainless steel fibers having a composition exactingly detailed in the claim. An exemplary process for obtaining these stainless steel fibers is presented in detail in the specification on page 16, with reference to Fig. 2. Element 205 depicts a cross-section of stainless steel fibers according to the present invention.

The Office Action asserts that Marandel (which is relied on in both sets of rejections, as the Office Action recognizes that none of the cited references teach or suggest the claimed composition) teaches “stainless steel fibers . . . having a composition comprising” the elements recited in the claims. (Office Action of June 30, 2006, emphasis added.) This is not correct.

Marandel does not teach stainless steel fibers. Marandel only teaches a mono wire. Accordingly, the rejection of the claims is based upon a fundamental misreading of a critical

reference, and thus a *prima facie* case of obviousness has not been established for at least this reason.

Applicants respectfully request that in the event that the present claims are again rejected in view of Marandell, Examiner Gray specifically identify where Marandell teaches the alleged steel fibers, or else allow the claims.

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Dependent Claims 43-45 and 49: Claims 43-45 and 49 depend upon claim 1 and are allowable over the prior art for at least the reasons discussed above. Furthermore, the prior art fails to disclose or suggest a plastic article with stainless steel fibers of the composition recited in claim 1 that have undergone a deformation ϵ of at least 4.5 or 4.8 or 5.2, as recited in claims 43-45, or have an MI value that permits a reduction with a deformation of at least 4.5, as recited in claim 49. The Office Action identifies nothing in the prior art to the contrary.

Applicants respectfully request that in the event that the present claims are again rejected, Examiner Gray specifically identify where the recitations of claims 43-45 and 49 are present in the prior art, or else allow the claims.

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In sum, even if the first requirement of MPEP § 2143 were to be considered satisfied, the third requirement of MPEP § 2143 is not satisfied in the Office Action, since the cited references do not teach each and every element of the present invention. Thus, the present claims are allowable.

Lack of Suggestion or Motivation to Modify or Combine the References

For the purposes of this section, Applicants will assume *arguendo* that the present invention may seem like a simple combination of various elements that are allegedly found in the prior art (which has not been demonstrated, as detailed above). *Applicants use this*

section to demonstrate that the present invention is the work of the innovator and not the work of the mere ordinary artisan. That is, Applicants submit that the following text provides a road map which will lead the PTO to a determination that the claimed inventions are, in fact, not obvious, despite any initial perception to the contrary. This road map relies heavily on the MPEP, and Applicants hope that through dedicated reliance on the MPEP, they will be able to convince the PTO of the innovative nature of the present inventions.

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MPEP §2141.01(a), entitled “Analogous and Nonanalogous art,” states that “to rely on a reference under 35 U.S.C. 103, it must be analogous prior art.” Applicants submit that wire for tire reinforcement is not analogous to EMI-shielding / EDS. Indeed, the tire arts are so far removed from the EDS / EMI-shielding arts that one versed in EDS / EMI-shielding would not have been motivated to look to the tire arts. Only the innovator would do so, as is detailed in MPEP §2141.01(a).

In this regard, there is no evidence that an artisan versed in the EDS / EMI-shielding arts in the 2000 / 2001 timeframe would look to techniques (in Marandel) involved in the construction of tires.

“[C]ommon sense” must be applied in deciding in which fields a person of ordinary skill would reasonably be expected to look. *Oetiker*, 24 U.S.P.Q.2d at 1446. In *Oetker*, the Court found that “[i]t has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments.” *Id.* In a similar fashion, a person of ordinary skill in the EDS / EMI-Shielding arts would not reasonably look to the tire field.

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MPEP §2144.05(III), entitled Rebuttal Of *Prima Facie* Case Of Obviousness, states that a “*prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention.” (MPEP § 2144.05(III), second paragraph, emphasis added, citations omitted.)

Marandel/Hauser teaches away from the recitation in the claims regarding the relationship of the composition of the stainless steel - that the relationship be less than or equal to -60 (the relationship is referred to in the claims utilizing the shorthand "MI," while Marandel/Hauser utilize the shorthand "JM"). Specifically, Marandel/Hauser states that the

index of JM [(i.e., MI)] must be in the interval from -55 to -30. *In fact, if JM is lower than -55, the quantity of martensite formed remains low and the tensile strength cannot achieve high values above 2200 MPa*, even after final drawing with a cumulative deformation ϵ close to 4.5.

(Hauser, col. 6, lines 34-39, emphasis added.)

Claim 1 recites a value of MI/JM that is less than or equal to -60, which is outside the express range identified in Hauser (and thus Marandel – note that even in the non-English Marandel, the relationship equation and the range of -55 to -30 may readily be ascertained at paragraph 0015). Applicants submit that one of ordinary skill in the art would not have been motivated to modify Marandel to have a MI/JM value of less than or equal to -60, as Marandel expressly teaches that values below -55 are to be avoided. This is no mere trivial range. Instead, it represents an explicit warning to the ordinary artisan to stay within the taught range, as straying outside that range would result in unacceptable quantities of martensite, resulting in unacceptable tensile strength values. Further, Marandel/Hauser distinguishes itself from the prior art, which uses high deformations that result in higher martensite content, which causes a sensitivity to wire breaking. (Hauser, col. 1, lines 52-63.) To modify the composition of Marandel to have a MI/JM value outside of the interval of -55 to -30 would contravene the teachings (indeed, warnings) detailed therein. Accordingly, Marandel teaches away from the present invention for at least this reason, but there is more.

As noted above, Marandel teaches a mono wire. A mono wire is diametrically opposite of bundle drawn fibers. Accordingly, Marandel would have discouraged the ordinary artisan from modifying Marandel to obtain a bundle as claimed. Further, Marandel teaches drawing the wire to have a final diameter of 0.1-0.4 mm. The diameter of the wire must be substantial because it is to be utilized in tires. In this regard, the ordinary artisan would have been discouraged from considering the teachings of Marandel to obtain bundle drawn stainless steel fibers having an equivalent diameter as claimed.

For at least these reasons, Marandel teaches away from the inventions of claims 1 and 31. Accordingly, pursuant to MPEP §2144.05(III), to the extent that a *prima facie* case of obviousness may have been established in the Office Action, that case is hereby rebutted.

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MPEP §2141.02, subsection 3, states that a “patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the ‘subject matter as a whole’ which should always be considered in determining the obviousness of an invention under 35 U.S.C. §103.”

Through their ongoing work to improve the art, the Applicants discovered the deleterious effects of diffusion relating to stainless steel fibers. Accordingly, thorough their inventive efforts, the Applicants arrived at the inventions as now claimed. Their efforts have not been taken into account in the rejection of the claims in the Office Action. Accordingly, the rejections fail to comport with the requirements of MPEP §2141.02, and thus a *prima facie* case of obviousness has not been established for yet another reason.

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MPEP § 2143.01, subsection 3 specifically states that the “mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” (MPEP § 2143.01, subsection 3, first sentence, citations omitted.) The Office Action fails to provide sufficient motivation to modify either of Soens or Rivas to arrive at the inventions of the claims. In fact, the Office Action basically relies on the alleged ease by which the cited references may be combined/modified. This is contrary to the procedures stipulated in the MPEP. In this regard, the Office Action states that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the stainless steel fibers of Soens, fibers of the type taught by Marandel, with the expectation of a known component functioning in its known manner.” The Office Action makes a similar statement in regard to the modification of the shielding of Rivas. Simply because references maybe combined, even if such combination is easy, does not mean that it would have been obvious to so combine those references, as the MPEP makes explicitly clear. Additionally, when MPEP § 2143.01,

subsection 3, is combined with MPEP§ 2143.01, subsection 4, which details that the mere fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness, it is clear that the motivation proffered in the Office Action does not comport with the MPEP.

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MPEP 2142: Further, the Office Action is completely devoid of any argumentation that motivation was present in the prior art. Instead, the alleged motivation is conclusory, and, in fact, relies on Applicants' disclosure. Indeed, it sounds in impermissible hindsight. MPEP 2142, entitled "Legal Concept of *Prima Facie* Obviousness," states that "impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." Applicants provide a rationale for utilizing fibers having the claimed composition, and the Office Action utilizes Applicants' own disclosure against them for motivation to modify the prior art. While it is permissible under certain circumstances to use teachings in the "background section" of an application to teach missing *elements* of the prior art, it is impermissible to use Applicants' application against them for motivation to combine or modify references.

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MPEP 2143.01(V) states that the "proposed modification cannot render the prior art unsatisfactory for its intended purpose." As detailed above, modifying the MI/JM value to be -60 or less (*i.e.*, outside the range of -55 to -30) would render the device of Marandel/Hauser inoperable due to the low quantity of martensite formed the insufficient tensile strength. Thus, the proposed modifications to the cited references violate yet additional provisions of the MPEP.

Dependent Claims 43-45 and 49: The Office Action states that it would have been obvious to modify the reduction disclosed by Marandel through routine experimentation to provide the recited reduction. However, this argument ignores the express teachings of Marandel/Hauser. Hauser distinguishes itself from prior art compositions that form

martensite through work hardening from high reductions because these wires become break-sensitive. (Hauser, col. 1, lines 47-51, 59-63.) Hauser discloses that wire deformation ϵ should preferably be smaller than 4.5. (Hauser et al. at col. 2, lines 48-50; col. 4, lines 32-43; col. 6, lines 34-38.) Hauser also discloses two comparison compositions, C and E, that are drawn with high deformations. (See Tables 1 and 2 of Hauser.) However, these compositions have JM values of -78 and -81, respectively, which are far outside of the range required by Hauser et al. in col. 6, lines 34-38. Hauser shows in Table 2 that compositions C and E are susceptible to breakage when drawn. Therefore, Marandel/Houser teaches away from reductions with a deformation ϵ of at least 4.5.

In light of the teachings of Marandel/Houser against deformations ϵ of at least 4.5, it would not have been obvious to one of ordinary skill in the art to modify the prior art references to provide a plastic article with stainless steel fibers of the composition recited in claim 1 that have undergone a deformation ϵ of at least 4.5 or that have an MI value that permits a reduction with a deformation of at least 4.5.

Furthermore, the Office Action has not provided a motivation for why one of ordinary skill in the art would have been motivated to modify the deformations disclosed by Marandel/Houser through routine experimentation. In light of the teachings of Marandel/Houser against deformations ϵ of at least 4.5, one of ordinary skill in the art would not have had a motivation to make such a modification. Applicants further note that only result-effective variables can be optimized through routine experimentation. See MPEP §2144.05. The Office Action has not shown how deformation is recognized as a result-effective variable in the cited prior art or that the determination of an optimum deformation range could be conducted through routine experimentation.

The Office Action has not provided reasons why it would have been obvious to one of ordinary skill to modify the teachings of the prior art references to make the articles of claims 43-45 and 49, particularly in light of the express teachings of Marandel/Houser. Withdrawal of these rejections is respectfully requested.

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In summary, because of the lack of suggestion or motivation in the prior art to modify the reference, the first requirement of MPEP § 2143 has not been met and, hence, a *prima facie* case of obviousness has not been established.

Prior Arguments

Applicants hereby incorporate by reference in their entirety all of their prior arguments regarding the allowability of the claims.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Examiner Gray is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

Date

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By

Martin J. Cosenza
Attorney for Applicants
Registration No. 48,892

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 295-4747
Facsimile: (202) 672-5399